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## **(54) CONTROL OF CONTENT OF SUGAR CHAIN HAVING DIFFERENT BRANCHING NUMBERS IN THE COMPOSITION OF N-BOUND SUGAR CHAIN CONTAINED IN GLYCOPROTEIN**

### **(57)Abstract:**

**PROBLEM TO BE SOLVED:** To provide a method for producing glycoprotein having controlled or modified branching composition of sugar chain (ratio of sugar chain having different branching numbers to total sugar chain) by controlling the branching structure which is the skeletal structure of added N-bound sugar chain in glycoprotein produced by a eukaryote intracellularly and extracellularly.

**SOLUTION:** This method comprises controlling the content of sugar chain having different branching numbers in N-bound sugar chain which is added to glycoprotein produced by a eukaryote by regulating the relative activity of  $\beta$ -1,4-galactose transferase to the activity of  $\beta$ -1,4-N-acetylglucosamine transferase IV and/or  $\beta$ -1,6-N-acetylglucosamine transferase V by controlling the expression amount of the gene coding for  $\beta$ -1,4-galactose transferase in an eukaryotic cell capable of producing glycoprotein having N-bound sugar chain.

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